

Commodity Spotlight



Sue Baker

Corn Production & Use To Hit Record Highs

Record U.S. corn production is in the forecast for 2000, with higher acreage planted and record yields. Anticipated record-high domestic demand and bright prospects for exports will limit the stocks gain. Nevertheless, ending stocks are expected to be the highest since 1987/88, and market prices will remain weak.

Ideal spring weather encouraged U.S. farmers not only to plant corn earlier than usual, but also to seed more acres than they had anticipated in March. (In much of the corn-producing area, though, soils were dryer than usual early this spring, which had caused concern.) By mid-May, farmers had planted 91 percent of the crop, compared with 70 percent last year and a 62-percent average over the previous 5 years. The 79.6 million acres estimated in the June 2000 *Acreage* report was up 1.7 million acres from the March *Prospective Plantings* report and 2.1 million acres above 1999.

Favorable weather conditions prevailed through the summer in most major producing areas, and average yield in 2000 is forecast at a record 141.8 bushels per acre, up from 133.8 bushels last year and from 1994's previous record of 138.6

bushels. Total corn production in 2000 is forecast at 10.4 billion bushels, up from 9.4 billion in 1999. With more stocks on hand at the beginning of the period, total supply in 2000/01 is expected to exceed 1999/2000 by 8 percent.

Demand Remains Strong

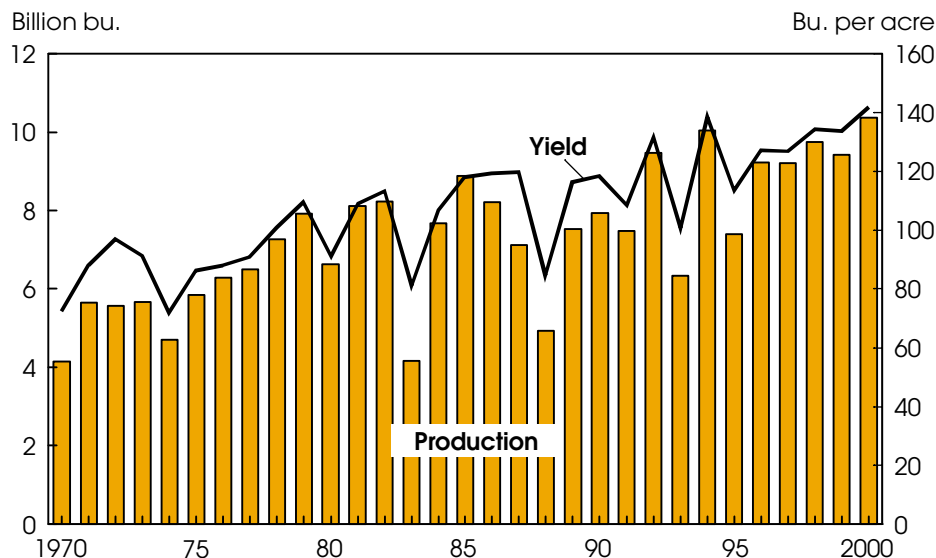
For 2000/01, USDA forecasts an all-time high of 7.7 billion bushels for domestic use of corn as livestock feed and for food, seed, and industrial use—up 2 percent from that expected in 1999/2000 (the season begins September 1).

Grain-consuming animal units in 2000/01 are projected to increase 1 percent from the 89 million units in 1999/2000. Dairy, poultry, and hog numbers are expected to rise slightly from a year earlier, but cattle on feed may decline in 2001.

Corn use by the poultry and hog industries should remain strong in 2000/01, given their prospective increases in production. Compared with projections for this year, production in 2001 is expected to rise 4 percent for broilers, 1 percent for turkeys, and 1 percent for eggs. Pork production is projected up 1 percent.

Milk producers, encouraged by weak corn prices, are expected to maintain heavy grain feeding and keep demand for corn strong, even though milk prices may be weaker in 2001. Milk production is projected at 167.5 billion pounds in 2001, down slightly from 2000.

U.S. Corn Yield and Production Trend Higher



2000 forecast.

Economic Research Service, USDA

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Projected beef production for 2001 is 25.5 billion pounds, down 5 percent from 2000. The expected decrease suggests that need for feed by beef feedlots may weaken in 2001.

With long-term demand based on a growing U.S. population, corn demand for food, seed, and industrial uses will remain strong, up 3 percent from 1999/2000 to 2 billion bushels. In foods, corn products are used mainly in corn syrup and other sweeteners, cornstarch, corn chips, and cereals. Industrially, corn is used to produce ethanol, starch for home-building products, and alcohol for external use.

In 1999/2000, total use of corn in sweeteners is projected up 2 percent from 1998/99. High-fructose corn syrup (HFCS)—used principally in soft drinks—is expected to rise 2 percent in 1999/2000 (up from 530.5 million bushels in 1998/99) and another 2 percent in 2000/01. Weaker sugar prices and a decline in HFCS exports may have limited this year's increase. Net corn sweetener exports in corn equivalents for September 1999–June 2000 were down 1 percent from the same period a year earlier, partly because of ongoing negotiations with Mexico over U.S. HFCS shipments—recently subject to increased tariffs—and U.S. sugar imports.

Corn used to make glucose and dextrose in 1999/2000 is projected up 3 percent from 219 million bushels in 1998/99 and is expected to rise 2 percent in 2000/01. Glucose and dextrose use has bounced back from a decline in 1998/99, as these sweeteners have found their way into more foods.

Ethanol use, contrary to normal seasonal declines, remained strong in the summer of 2000 because of the high price of gasoline and of methyl tertiary butyl ether (MTBE), another oxygenate used in motor vehicle fuels to make them burn more cleanly. Consequently, corn used to make ethanol is expected to rise 8 percent in 1999/2000 (up from 525 million bushels in 1998/99), and 5 percent in 2000/01 (up from an expected 570 million bushels in 1999/2000). MTBE competes with ethanol/alcohol use in reformulated gasoline, as both alcohol and MTBE enhance octane. In fact, processing plants are being built or planned in anticipation of a substantially greater demand for ethanol.

Corn used to make alcohol for beverages and for manufacturing purposes was up 2 percent in 1999/2000 from the 127 million bushels in 1998/99 and is predicted to rise slightly in 2000/01. Low corn prices have kept the cost of producing alcohol

(used in rubbing alcohol and aftershave, for example) competitive with alternatives, and population growth should increase demand. Corn for cereals and other food products is expected to rise 3 percent in 2000/01, up from 185 million bushels in 1999/2000.

Corn used in producing starch in 1999/2000 rose 4 percent (up from 240 million bushels in 1998/99). The use of starch to make products such as paper and wallboard generally increases when the economy is strong, as it is now. Even though home construction is slowing in response to higher interest rates, corn use for starch products is projected to rise 2 percent in 2000/01.

Loan Deficiency Payments To Offset Corn Price Drop

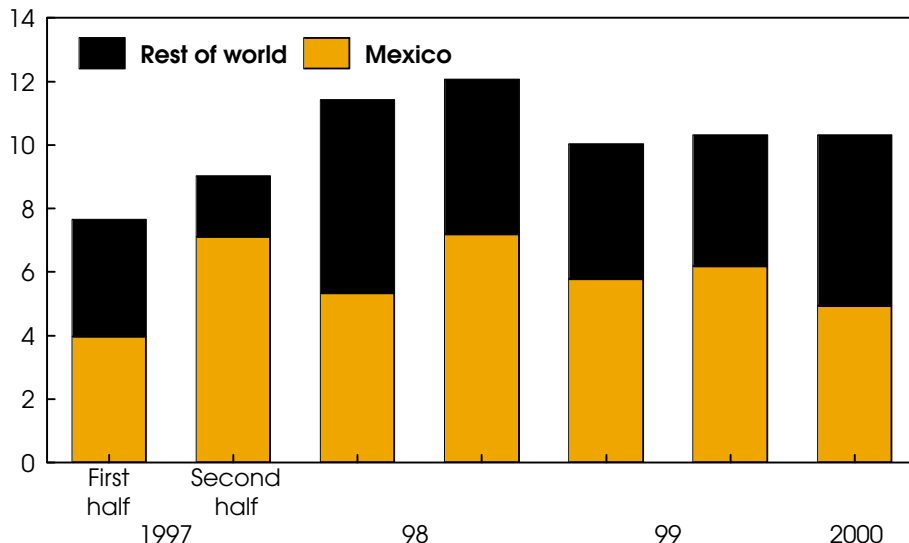
Even though corn use should reach record highs in 2000/01, corn prices are likely to be weak as a result of large U.S. stocks. Farmers can expect to sell their corn for \$1.50 to \$1.90 per bushel, compared with an expected \$1.80 in 1999/2000. This contrasts with an average of \$2.52 per bushel in the previous 5 years. It was for just such a contingency that assistance programs were written into the 1996 Farm Act. Key provisions are nonrecourse marketing assistance loans and loan deficiency payments (LDP's), both available to producers who entered into production flexibility contracts with USDA.

Nonrecourse marketing assistance loans provide interim financing to eligible producers of feed grains and other commodities covered by the program and provide income support when prices are low. Corn used as collateral may be forfeited to USDA's Commodity Credit Corporation at maturity, or loans may be repaid at the lesser of the loan rate plus accrued interest or the local, posted county price. As of September 20, 2000, feed grain producers had outstanding loans on 20 million bushels of 2000-crop corn as collateral and 244 million bushels on 1999-crop. The value of the outstanding loans totaled \$40 million for 2000, and \$441 million for 1999.

If local prices (as calculated by USDA's Farm Service Agency) are below the county loan rate, eligible producers may

U.S. Corn Sweetener Exports to Mexico Have Declined

Million bu. equivalent



U.S. net exports of corn sweeteners, converted to equivalent bushels of corn.

Economic Research Service, USDA

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opt for an LDP in lieu of a loan. As of September 20, 2000, eligible producers had collected \$94 million in LDP's for 2000-crop corn (including silage), covering 217 million bushels or about 2 percent of the crop; the average payment rate was 44 cents per bushel. For the 1999 crop, eligible producers collected nearly \$2 billion in LDP's, covering about 77 percent of the crop; the average payment rate was 27 cents per bushel.

U.S. Corn Exports To Rise Sharply in 2000/01

U.S. corn exports are forecast up 250 million bushels in 2000/01, to 2.175 billion. Expanding world corn trade (to the highest level in over a decade), combined with low U.S. corn prices and reduced competition from China and Eastern Europe, is expected to result in a sharp increase in U.S. market share. Increases in corn exports from the two other major exporters, Argentina and South Africa, are expected to be relatively small.

Reduced export competition for the U.S. stems partially from drought damage in the critical growing areas of northeastern China and from a prolonged period of dry conditions and very high temperatures in Eastern Europe, which reduced that area's corn production by 36 percent. The main corn growing areas of Romania, Hungary, Bulgaria, and the former Yugoslavia were particularly hard hit. The amount of planted area in China also declined, the result of reduced price supports and strong prices for soybeans. China's corn production is forecast down 10 percent from a year ago.

The jump in the U.S. corn crop is largely offset by sharp drops in China and Eastern Europe. Nevertheless, world corn production in 2000/01 is forecast to reach a record 607 million tons because of gains in the European Union (EU) and Brazil. Generally favorable growing conditions are expected to generate record yields in the EU, while strong prices expand area in Brazil.

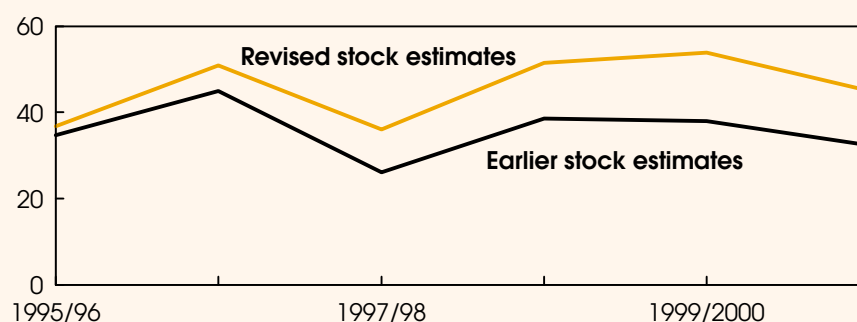
In 2000/01, world corn consumption is projected at a record 607 million tons, growing at the same rate as production (1 percent) but well under the 3 percent seen in 1999/2000.

New Estimates for China's Corn Stocks & Use

In August, USDA revised China's supply-and-use balances for corn, significantly lifting estimates of the country's ending stocks for the period 1995/96 through 2000/01, based on statements by various Chinese officials. (China does not publish official grain stocks data.) In addition, price levels in China indicate stocks are not as tight as USDA data previously indicated. Historical production and trade data are official Chinese data and were not revised, but USDA's estimates of use have been reduced. Revised estimates reflect strong but slower growth in China's corn feed use from 1995/96 to 2000/01, averaging 3.9 percent per year.

China's Ending Stocks of Corn Revised Upward

Million metric tons



1999/2000 estimated, 2000/01 projected. Historical revision made in USDA's August 11, 2000 *World Agricultural Supply and Demand Estimates*.

Economic Research Service, USDA

Where national economies are sluggish and where country-specific adverse conditions exist, declines in corn use are predicted. In Japan, the world's largest importer of corn, a decline in corn use is expected to continue as meat imports rise, and use is also expected to drop in South Korea, where disease problems will limit hog production. Stumbling economies in Sub-Saharan Africa and the former Soviet Union are expected to keep growth in corn use stagnant. In Eastern Europe, predictions are for foreign exchange constraints and sharply reduced grain production to cut short a nascent rebound in the live-stock sector, reducing corn consumption.

In Latin America, after 4 years of stagnation, corn consumption will resume its normal upward trend as the economy improves. Economic growth is also expected to boost corn feed use in South Asia, Southeast Asia, and China. EU corn consumption is expected to expand—exceeding 40 million tons for the first time in 20 years—despite large supplies of feed wheat. Drought in North Africa and parts of the Middle East is anticipated

to combine with high barley prices to push corn imports and consumption up in these regions. Now that several years have passed since Taiwan's swine herd was decimated by foot-and-mouth disease (see Special Article, page 20), Taiwan's corn consumption has risen in 1999/2000 and is expected to continue to grow slowly in 2000/01.

World corn ending stocks are expected to remain nearly unchanged in 2000/01, at 128 million tons—the largest volume since the 1985–87 period when U.S. government stocks were huge. More of the global corn stocks in 2000/01 will be concentrated in the U.S., as foreign corn stocks drop by 12 million tons (to 71 million), mostly the result of reduced stocks in China, compounded by lower stocks in Eastern Europe. At projected levels, large U.S. stocks will continue to put downward pressure on U.S. corn prices in 2000/01. **AO**

Allen Baker (202) 694-5290 and Edward Allen (202) 694-5288
albaker@ers.usda.gov
ewallen@ers.usda.gov